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Susumu Aoyama

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KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
Suite 400
WASHINGTON, DC 20005

EXAMINER

WHIPKEY, JASON T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,501	Applicant(s) AOYAMA ET AL.	
	Examiner Jason T. Whipkey	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 22, 2009, has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 3-16 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 3-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not

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described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Regarding **claims 1 and 3-5**, the specification is silent with regard to including an information presentation part that shows that the image taken is a fixed-focus image.

Regarding **claims 6-9**, the specification is silent with regard to including an information presentation part that shows that the image taken is in the middle of the focusing action.

Regarding **claims 10 and 11**, the specification is silent with regard to including a process that shows that the image taken is a fixed-focus image.

Regarding **claim 12**, the specification is silent with regard to including a process that shows that the image taken is an auto-focusing image.

Regarding **claims 13 and 15**, the specification is silent with regard to generating information that shows that the image taken is a fixed-focus image.

Regarding **claims 14 and 16**, the specification is silent with regard to generating information that shows that the image taken is an auto-focus image.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3, 4, 6-8, 10, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins (U.S. Patent No. 6,549,729) in view of Murata (U.S. Patent No. 5,249,058) and Hamada (Japanese Patent Publication No. 07-056227).

Regarding **claim 1**, Robins discloses an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an optical system (lens 101) for capturing an image comprising:

a focusing mechanism (see column 2, line 1) for moving said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25);

a switch (shutter release button 117) that functions as a focusing switch (via switch S1 115; see column 2, lines 45-51) and also functions as a shutter switch (via switch S2 116; see column 2, lines 61-65), wherein said switch when operated orders a focusing action (see column 2, lines 45-51) or orders capturing of the image (see column 2, lines 61-65); and

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a controller (logic unit 110) that decides whether the optical system is in a final lens position or not during a focusing action of said focusing mechanism due to said switch (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65), and in the case where a shutter operation of said switch is performed under a state that the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65), shifts said optical system to a fixed focus position from an auto-focusing position and takes a fixed focus image (see column 5, lines 11-25).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing device for a camera, wherein:

during the focusing action (see Figure 5), a focusing value is measured with an origin at a lens position where a focus position becomes an infinity (see column 4, line 65, through column 5, line 8), and if the measured focusing value is not smaller than a maximum focusing value, a decision [about whether the optical system is in a final lens position] is performed with making the measured focusing value into the maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the

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current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a system that coordinates photography timing and focus, as described by Robins, with a system that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to including an information presentation part that shows that the captured image is a fixed-focus image.

Hamada discloses a camera (see Drawing 1), including:

an information presentation part (liquid crystal panel 10) that presents information showing that the image taken by the shutter operation is a fixed focus image (the 1.5m indicator is lit while a fixed-focus mode is used; see Drawing 7 and page 5, lines 11-13, of the provided computer translation).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is a fixed-focus image.

Regarding **claim 3**, Robins discloses:

said switch is provided as a first switch (115; see Figure 1), and a switch which is used in photographing by a fixed focus is also provided as a second switch (116; see column 2, lines 61-65) separated from the first switch.

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Regarding **claim 4**, Robins discloses:

said switch functions as said focusing switch at a state of a half-push and functions as said shutter switch at a state of a full-push (see column 2, lines 31-65).

Regarding **claim 6**, Robins discloses an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an optical system (lens 101) for capturing an image comprising:

a focusing mechanism (see column 2, line 1) for moving said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25);

a switch (shutter release button 117) that functions as a focusing switch (via switch S1 115; see column 2, lines 45-51) and also functions as a shutter switch (via switch S2 116; see column 2, lines 61-65), wherein said switch according to a condition of operation orders a focusing action (see column 2, lines 45-51) or the capturing of the image (see column 2, lines 61-65); and

a controller (logic unit 110) that decides whether the optical system is in a final lens position or not during a focusing action of said focusing mechanism due to said switch (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65), and in the case where a shutter operation of said switch is performed under a state that the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65) takes an image at a focus position in the middle of the

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focusing action (during the process of focusing, the lens is moved to correspond to the hyperfocal distance; see column 5, lines 11-25).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing device for a camera, wherein:

during the focusing action (see Figure 5), a focusing value is measured with an origin at a lens position where a focus position becomes an infinity (see column 4, line 65, through column 5, line 8), and if the measured focusing value is not smaller than a maximum focusing value, a decision [about whether the optical system is in a final lens position] is performed with making the measured focusing value into the maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a system that coordinates photography timing and focus, as described by Robins, with a system that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

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Robins is also silent with regard to including an information presentation part that shows that the captured image is in the middle of the focusing action.

Hamada discloses a camera (see Drawing 1), including:

an information presentation part (liquid crystal panel 10) that presents information showing that the image taken by the shutter operation is an image at the focus position in the middle of the focusing action (the 1.5m indicator is lit when the focus location in the middle of the focusing range; see Drawing 7 and page 5, lines 11-13).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is in the middle of the focusing action.

Regarding **claim 7**, Robins discloses:

said switch is provided as a first switch (115; see Figure 1), and a switch which is used in photographing by a fixed focus is also provided as a second switch (116; see column 2, lines 61-65) separated from the first switch.

Regarding **claim 8**, Robins discloses:

said switch functions as said focusing switch at a state of a half-push and functions as said shutter switch at a state of a full-push (see column 2, lines 31-65).

Regarding **claim 10**, Robins discloses a photographing control method of an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an imaging part

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which catches an image obtained through an optical system (lens 101; see *id.*), and a focusing mechanism (see column 2, line 1) which moves said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25), comprising:

a process that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65);

a process that decides whether the optical system is in a final lens position or not during a focusing action of the focusing mechanism (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65);

a process that detects said shutter operation and, if the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65), switches to said fixed focus position from said auto-focusing position of said optical system under the focusing action (see column 5, lines 11-25); and

a process that takes a fixed focus image caught at said fixed focus (see *id.*).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing method (see Figure 5) for a camera, including:

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a process that measures a focusing value with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8);

a process that makes the measured focusing value into a maximum focusing value if the measured focusing value is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is a fixed-focus image.

Hamada discloses a camera (see Drawing 1), including:

a process that presents information showing that the image taken by the shutter operation is a fixed focus image (the 1.5m indicator is lit while a fixed-focus mode is used; see Drawing 7 and page 5, lines 11-13).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is a fixed-focus image.

Regarding **claim 12**, Robins discloses a photographing control method of an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an imaging part which catches an image obtained through an optical system (lens 101; see *id.*), and a focusing mechanism (see column 2, line 1) which moves said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25), comprising:

- a process that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65);

- a process that decides whether the optical system is in a final lens position or not during a focusing action of the focusing mechanism (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65);

- a process that detects said shutter operation and, if the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65), takes an auto-focusing image caught by said imaging part in the middle of the focusing action (during the process of focusing, the lens is moved to correspond to the hyperfocal distance; see column 5, lines 11-25).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum

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focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing method (see Figure 5) for a camera, including:

a process that measures a focusing value with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8);

a process that makes the measured focusing value into a maximum focusing value if the measured focusing value is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is an auto-focus image.

Hamada discloses a camera (see Drawing 1), including:

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a process that presents information showing that the image taken by the shutter operation is an auto-focusing image (all indicators are extinguished when an auto-focus mode is used; see Drawing 5 and page 4, lines 43-45).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is an auto-focus image.

Regarding **claim 13**, Robins discloses a computer readable recording medium (inherently present, as a control program is run on the camera's microprocessor; see column 4, lines 53-65) storing a photographing control program (see *id.*) of an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an imaging part which catches an image obtained through an optical system (lens 101; see *id.*), and a focusing mechanism (see column 2, line 1) which moves said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25), the control program comprising:

a step that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65);

a step that decides whether the optical system is in a final lens position or not during a focusing action of the focusing mechanism (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65);

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a step that detects said shutter operation and, if the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65), switches to said fixed focus position from said auto-focusing position of said optical system under the focusing action (see column 5, lines 11-25); and

a step that takes a fixed focus image caught at said fixed focus (see *id.*).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing method (see Figure 5) for a camera, including:

a step that measures a focusing value with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8);

a step that makes the measured focusing value into a maximum focusing value if the measured focusing value is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the

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art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is a fixed-focus image.

Hamada discloses a camera (see Drawing 1), including:

generating presentation information showing that the image taken by the shutter operation is a fixed focus image (the 1.5m indicator is lit while a fixed-focus mode is used; see Drawing 7 and page 5, lines 11-13, of the provided computer translation).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is a fixed-focus image.

Regarding **claim 14**, Robins discloses a computer readable recording medium (inherently present, as a control program is run on the camera's microprocessor; see column 4, lines 53-65) storing a photographing control program (see *id.*) of an electronic device (such as a digital camera; see Figure 1 and column 1, lines 63-67) having an imaging part which catches an image obtained through an optical system (lens 101; see *id.*), and a focusing mechanism (see column 2, line 1) which moves said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25), the control program comprising:

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a step that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65);

a step that decides whether the optical system is in a final lens position or not during a focusing action of the focusing mechanism (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65);

a step that detects said shutter operation and, if the optical system is not in the final lens position (if the focusing has not finished; see column 4, lines 61-65), takes an auto-focusing image caught by said imaging part in the middle of the focusing action (during the process of focusing, the lens is moved to correspond to the hyperfocal distance; see column 5, lines 11-25).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing method (see Figure 5) for a camera, including:

a step that measures a focusing value with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8);

a step that makes the measured focusing value into a maximum focusing value if the measured focusing value is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the

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current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is an auto-focus image.

Hamada discloses a camera (see Drawing 1), including:

generating presentation information showing that the image taken by the shutter operation is an auto-focusing image (all indicators are extinguished when an auto-focus mode is used; see Drawing 5 and page 4, lines 43-45).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is an auto-focus image.

Regarding **claim 15**, Robins discloses an integrated circuit (a microprocessor; see column 4, lines 54-56) to which an imaging part catching an image obtained through an optical system (lens 101; see *id.*) and a focusing mechanism (see column 2, line 1) moving said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal

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distance; see column 5, lines 22-25) are connected externally (microprocessors are inherently self-contained), comprising:

- a detection part that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65); and

- a control part (logic unit 110) that decides whether the optical system is in a final lens position or not (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65) and, on the basis of a detection of said detection part, switches to said fixed focus position from said auto-focusing position of said optical system under the focusing action and takes a fixed focus image caught at said fixed focus if the optical system is not in the final lens position (see column 4, lines 61-65, and column 5, lines 11-25).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing system (see Figure 5) for a camera, including:

- a focusing value measured with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8); and

- wherein said control part makes the measured focusing value into a maximum focusing value to perform the decision if the measured focusing value

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is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is a fixed-focus image.

Hamada discloses a camera (see Drawing 1), including:

generating presentation information showing that the image taken by the shutter operation is a fixed focus image (the 1.5m indicator is lit while a fixed-focus mode is used; see Drawing 7 and page 5, lines 11-13, of the provided computer translation).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is a fixed-focus image.

Regarding **claim 16**, Robins discloses an integrated circuit (a microprocessor; see column 4, lines 54-56) to which an imaging part catching an image obtained through an optical system

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(lens 101; see *id.*) and a focusing mechanism (see column 2, line 1) moving said optical system to an auto-focusing position (see column 2, lines 45-51) or a fixed focus position (a hyperfocal distance; see column 5, lines 22-25) are connected externally (microprocessors are inherently self-contained), comprising:

- a detection part that detects a shutter operation in the middle of a focusing action of said focusing mechanism (see column 2, lines 61-65); and

- a control part (logic unit 110) that decides whether the optical system is in a final lens position or not (the system determines whether all of the camera's pre-photograph activities, including focus, have been completed; see column 4, lines 56-65) and takes an auto-focusing image in the middle of the focusing action (during the process of focusing, the lens is moved to correspond to the hyperfocal distance; see column 5, lines 11-25) based on a detection of said shutter operation of said detection part if the optical system is not in the final lens position (see column 4, lines 61-65).

Robins is silent with regard to measuring a focusing value during the focusing action using a lens origin at infinity and making the measured focusing value into the maximum focusing value when the measured focusing value is not smaller than the maximum focusing value.

Murata discloses a focusing system (see Figure 5) for a camera, including:

- a focusing value measured with an origin at a lens position where a focus position becomes an infinity, during the focusing action (see column 4, line 65, through column 5, line 8); and

wherein said control part makes the measured focusing value into a maximum focusing value to perform the decision if the measured focusing value is not smaller than a maximum focusing value (comparator 101 compares the maximum focus evaluating value with the current focus evaluating value; if the current value is greater, the current value becomes the maximum value and the ideal focusing position; see column 5, lines 12-23).

Combining a method that coordinates photography timing and focus, as described by Robins, with a method that determines an optimum focus location by finding a maximum focusing value, as described by Murata, would have been obvious to one of ordinary skill in the art at the time the invention was made, as there are a finite, predictable number of focusing methods available in the art.

Robins is also silent with regard to showing that the captured image is an auto-focus image.

Hamada discloses a camera (see Drawing 1), including:

generating presentation information showing that the image taken by the shutter operation is an auto-focusing image (all indicators are extinguished when an auto-focus mode is used; see Drawing 5 and page 4, lines 43-45).

As suggested on page 3, lines 12-15, an advantage of presenting information about a focus mode used is that a user can be apprised of the mode the camera is in. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system show that the captured image is an auto-focus image.

Art Unit: 2622

8. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins in view of Murata, Hamada, and Terasaki (U.S. Patent No. 7,119,843)

Claims 5 and 9 can be treated like claims 1 and 6, respectively. However, Robins is silent with regard to the device having two housing parts that fold up.

Terasaki discloses an imaging device, including:

a first housing part (arm 6 in Figure 5) that has said imaging part (imaging optical system 4);

a second housing part (phone body 1) that has said switch (shutter button 12; see column 5, lines 8-13); and

a coupling part (hinge 5) that couples said first housing part and said second housing part so that the first and second housing parts can be folded up (see column 4, lines 19-29).

Combining the imaging device disclosed by Robins with the imaging device shape disclosed by Terasaki would have yielded the predictable result of producing a device can be carried compactly. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system include two housing parts that fold up, as described by Terasaki.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robins in view of Murata, Hamada, and Iida (U.S. Patent No. 5,001,507).

Claim 11 can be treated like claim 10. However, Robins is silent with regard to superimposing a focusing mark on an image display.

Art Unit: 2622

Iida discloses an imaging device, including:

a process that superimposes a focusing mark (42 and 43 in Figure 10) representative of a distance between a pictured object and the optical system on an image, in the middle of said focusing action, which is caught by said imaging part, and displays it (on a viewfinder; see column 13, lines 47-61).

Combining the imaging method disclosed by Robins with the image display function disclosed by Iida would have yielded the predictable result of providing an operator with more information when composing an image, thus resulting in an improved output. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Robins's system include a focusing mark on an image display.

Allowable Subject Matter

10. Claim 2 is allowed.

Regarding **claim 2**, no prior art could be located that teaches or renders obvious an electronic device with an optical system, wherein a controller compares between a time required for bringing into focus a focusing mechanism and a time from starting of a focusing action until starting of a shutter operation, and changes the optical system to an autofocus position or a fixed focus position based on a result of the comparison.

Art Unit: 2622

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:30 A.M. to 6 P.M. eastern daylight time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye, can be reached at (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason T. Whipkey/
Examiner, Art Unit 2622